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**IN THE ABSTRACT:**

Please substitute the Abstract filed herewith.

**ABSTRACT**

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A mirror file system (MFS) is a virtual file system that links two or more file systems together and mirrors between them in real time. ~~When the MFS receives updated data from an application, all file systems linked by the MFS are updated in real time.~~ The file systems linked and mirrored through the mirror file system can be a local file system connected to a physical device, or a network file system exported by a remote system on a network. ~~The real-time mirroring mechanism provided by the MFS is transparent to user applications. The system administrator first sets up the~~ The mirroring mechanism is established by linking a file system to another file system on a single directory through an MFS mounting protocol. ~~These two file systems and their files are linked together and become a mirroring pair. Both copies are owned by, and under the management of, the MFS. All access to files or directories in both file system go through the MFS. The user~~ User applications perform normal file system operation and file/directory operation system calls like open, read, write and close functions from the pathname of either file system. ~~Most of the file operations (such as a read operation) only need to go to one file system under the MFS to get the data. Only when~~ When updates occur, such as a write operation, the MFS mechanism ensures that all data updates go to both the file systems. ~~With this mirroring mechanism of the MFS, the files/directories in one file system are mirrored to their mirroring counterparts of another file system in real time. With the MFS technology, a standalone system is able to make multiple copies of data available to the application. In the network environment, multiple servers owning the same data copy can be distributed on~~

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a<sup>3</sup> ~~the network and mirror the data to each other in real time to provide more efficient and  
more reliable service to their clients.~~

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